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HI-LIGHTS AND SIRENS Memo Series 00-03

September 2000

TO: Ambulance Service Providers
Ambulance Service Medical Directors
EMS Training Centers
First Responder Organizations
EMS Coordinators
EMS Advisory Board
Emergency Physicians Advisory Committee

FROM: Bureau of EMS and Injury Prevention
Wisconsin Emergency Medical Services Systems Section

RE: Miscellaneous Updates

COMINGS AND GOINGS

Dave Beyer has joined the EMS Systems Section of the Bureau of EMS & Injury Prevention as the new EMT Intermediate/Communications Coordinator. As the EMT Intermediate and Communications Coordinator, he will have overall responsibility and be the primary contact for the EMT-Intermediate programs and communications systems in the state. Dave has been involved with emergency services for over 20 years, serving as an EMT, a paramedic, a firefighter, a nurse, an instructor, and a manager in many different settings.

Mary Ellen Havel-Lang has left her position as the EMS Systems Section Licensing Manager to take a job in the Department of Health and Family Services, Office of Program Review and Audit. Until a new Licensing Manager is hired, her duties will be divided among Section staff as follows:

- General EMT-Basic questions - contact Nicky Anders, Joanne Herfel, Nora Stofflet or Nan Turner
- EMT-Basic reciprocity issues - contact Joanne Herfel
- License renewal questions - contact Norah Stofflet
- Paramedic issues, including reciprocity - contact Terry Gonderzik
- EMT-Intermediate issues, including reciprocity - contact Dave Beyer
- Background check, driving records - contact Sarah Ishado
- Complaints or questions regarding investigations - contact Nan Turner

RENEWAL UPDATE

As the ambulance services were advised in the initial licensing renewal instructions, all applications postmarked by June 30, 2000 met the deadline. Those applicants can continue to practice unless advised otherwise by the EMS Systems Section office. A licensee who failed to submit the completed renewal application by the renewal date may not represent himself or herself as, function as, or perform the duties of a licensed EMT after the date of license expiration.

We experienced an influx of applications at the end of the renewal period. This created a backlog of renewal applications to process. Please do not call about renewal licenses unless you do not receive a new license by October 1, 2000. New license applications continue to be processed as they arrive.

Ambulance Provider License Renewal and Medicare-Part B Reimbursement Eligibility
The EMS Systems Section office has heard from several providers that their Medicare-Part B reimbursement bills were being held because federal law requires ambulance providers to send Medicare a copy of their renewed license within 30 days after license expiration. Because of the volume of license renewal applications we are processing, most providers have not yet received their renewed license and the 30-day deadline has passed.

We've spoken with WPS-Medicare and they have agreed to use our list of providers that have pending applications and they will continue to reimburse until we finish the renewal process. If you've sent in your provider application, you are covered. We've also talked with WPS about the EMS Section sending them verifications of license and license levels for all providers so we could remove the individual provider from submitting some of the information to Medicare that we can send them for all providers. We'll keep you updated on any changes that occur, which will hopefully reduce your paperwork.

NEW OSHA BLOODBORNE PATHOGEN DIRECTIVE

The federal Occupational Safety and Health Administration (OSHA) issued a new bloodborne pathogen compliance directive (CPL2-2.44D). This document dated November 5, 1999, rescinds the previous CPL and provides new direction in interpreting the Bloodborne Pathogens Standard 29 CFR 1910.1030) in light of current recommended practice from the Centers for Disease Control and Prevention (CDC). All providers are covered by the same exposure control regulations as the Wisconsin Department of Commerce has adopted this CPL as its bloodborne/airborne compliance regulation.

While the scope of the standard is unchanged (any employee with reasonably anticipated exposure to blood or other potentially infectious material in the course of performing their job), the new CPL includes interpretation changes for several areas applicable to EMS. These include the exposure control plan itself, engineering and work practice controls (safer needle devices), hepatitis B virus (HBV) vaccination and post exposure follow-up, worker training and recordkeeping.

Existing exposure control plans must be modified to reflect changes in technology and changes recommended by CDC. Changes in the new CPL regarding the exposure control plan include:

- annual evaluation of the plan and of available engineering controls, including engineered safer needle devices
- a description of how employees will be trained in the use of safer needle and needleless devices
- HBV vaccination and titer testing
- information on hepatitis C virus
- a detailed protocol and process for documenting exposure incidents
- updating post-exposure evaluation and follow-up protocols taking into account the recommended 2-24 hour window of efficacy of chemical prophylaxis

Complete information on CPL2-2.44D is included in this mailing. Your major source of information on the OSHA Bloodborne CPL is the OSHA web-site at www.osha.gov or at the DHFS Occupational Health WebPages at www.dhfs.state.wi.us/dph_boh/.

EMS FUNDING ASSISTANCE PROGRAM UPDATES

All ambulance services desiring eligibility for direct payment of FAP funds and/or EMT Basic and EMT Basic Refresher tuition reimbursement must complete and return an application. If your service has not yet submitted an application for FY01, please do so immediately as they were due June 26, 2000. After October 1, 2000, the checks will be processed and training centers will be notified of services that haven't submitted an application and are no longer eligible for FAP paid tuition for EMT classes.

In reviewing expenditure reports, we have found that the funding is being used inappropriately in some cases. These funds are for the support and improvement of ambulance services. FAP funds are to be used to supplement existing ambulance service budgets for the purchase of ambulance vehicles, vehicle equipment, EMS equipment and supplies and for training of ambulance service personnel. The funds should not be used for the day to day operational costs of the ambulance service or for equipment primarily used by fire and/or police personnel.

Examples of inappropriate use of the EMS-FAP funds include ambulance vehicle (regular) maintenance including tires, fire equipment (SCBA breathing apparatus, cutting torches, and thermal imaging cameras), indirect costs, hepatitis B vaccinations, caregiver background checks, dues to EMS organizations, banquets and gifts.

Appropriate uses include training of EMS personnel over and above the EMT-Basic training. This training can include books, EMT-Intermediate and Paramedic training, seminars and conferences, emergency vehicle operations courses, farm rescue courses, extrication courses, etc. along with associated travel expenses. Other appropriate uses include major unexpected vehicle and equipment repair costs, purchase of new equipment, ambulance purchase and some ambulance supplies. If you have a doubt about an appropriate expenditure, please contact the EMS-FAP program coordinator for a determination.

FUNDING ASSISTANCE PROGRAM MINI-GRANT AWARDS

Nearly 100 Funding Assistance Program mini-grant applications were reviewed by a panel of three persons and scored on the basis of documented need, workplan, budget, time frame and pre-identified priorities. Awards were made on the basis of total score. Unfunded applicants should not be discouraged from applying for future competitive grant opportunities, but should thoroughly read and follow any instructions given in the application detail. Several applicants were disqualified because they did not follow the application instructions. The $30,000 available for these grants has been awarded to the following projects for the amounts indicated:

PROVIDER(S)	AMOUNT	PROJECT
Baraboo District Ambulance Delton Ambulance Service Wisconsin Dells EMS	$5000.00	This area of the state proposed to hire an EMS Coordinator for the three services and area hospital. They have dollars in the budget in the next fiscal year, but with this grant can hire an individual now to begin CQI programs, etc.
Sturtevant Fire Department Caledonia FD EMS Town of Mount Pleasant FD Town of Raymond Fire and Rescue Union Grove-Yorkville Fire Rescue Racine FDEMS	$5000.00	Begin development of mass casualty trailer for area use in the event of a mass casualty incident.
Bayfield-Ashland Counties EMS Council, Inc. Ashland FD EMS Bayfield Community Ambulance Barnes Ambulance Glidden Area Ambulance Great Divide Ambulance Service Iron River Ambulance Madeline Island Ambulance Mason Area Ambulance Mellen Area Ambulance Red Cliff Tribal Ambulance South Shore Area Ambulance Washburn Area Ambulance	$5000.00	Develop eight mass casualty kits to have housed throughout the two county area for readiness in the case of a mass casualty incident.
Random Lake Fire Department Oostburg Ambulance Plymouth FD Ambulance Squad Plymouth Ambulance Service	$5000.00	Funds to go toward Project Jumpstart 2000 (like Project Adam) which will purchase AEDs to be placed in schools and provide training to staff.
Beloit Fire Department	$2000.00	Purchase capnography unit and train paramedics in its use and in rapid sequence intubation.

North Fond du Lac EMS	$2000.00	Purchase weather alert radios for area schools, nursing homes, daycares and public buildings to provide the most immediate alert of weather watches and warnings.
Albany EMS	$1925.00	Funding to pay tuition costs for 5 members to attend and upgrade to Intermediate level.
Blue River Rescue Squad	$2000.00	Funding to help in purchase of computer system for the ambulance service and a defibrillator simulator for in-house training.
Readstown EMS	$2000.00	9-1-1 system and emergency weather warning system just being installed. Funding to provide public information and education to educate local public.

STATEWIDE TRAUMA ADVISORY COUNCIL (STAC) UPDATE

Act 154 of 1997 provided for the establishment of a Statewide Trauma Advisory Council that would consist of 13 members appointed by the Department of Health and Family Services Secretary Joe Leean. S.146.56, Wis. Stats. requires that the Statewide Trauma Advisory Council submit a report on the development and implementation of a statewide trauma system by January 1, 2001. The legislation also outlined the issues that need to be addressed in the report. The Council has been meeting on a monthly basis since February. The following is an update on the legislatively required tasks of each of the five subcommittees:

Classification and Verification subcommittee is developing a method to classify hospitals as to their respective trauma care capabilities. This will be an inclusive system, which means that all hospitals must be classified.

Out-Of-Hospital Care Issues subcommittee has developed triage and transport guidelines for adults and are currently working to include the pediatric population. In addition, recommendations have been made to the EMS Advisory Board to include trauma within the Interfacility Guidelines document. Also to be included in their plan is a method to improve communications.

Injury Registry subcommittee is developing a statewide trauma registry system.

Education & Training, Injury Prevention subcommittee has identified all of the stakeholders who will be involved in the education of the trauma system - from prehospital providers to lay public. Their goal is to develop a method to educate all personnel involved in the delivery of care and the lay public both in treatment and injury prevention.

System Evaluation & Quality Improvement subcommittee is to develop ongoing quality improvement and make recommendations on trauma advisory councils.

As a reminder: The STAC and subcommittees are open meetings in which anyone may participate. The next meeting is September 13 at the Monona Terrace in Madison. Subcommittee meetings begin at 9:30. The STAC meeting is held from 1 - 3 PM, although the September meeting will be from noon-3 PM.

UPDATE ON PEDIATRIC BASIC LIFE SUPPORT

WHEN should we begin chest compressions WITH a heart that's still beating?

By Del Szewczuga, RN, EMT-P – Milwaukee County EMS, EMSC Prehospital Education Committee, American Heart Association PALS National Faculty and William Perloff, MD – Chair of the Wisconsin Emergency Medical Services for Children Advisory Board

The question when should we begin chest compressions with a heart that's still beating has generated much discussion among students during CPR classes and among the instructors of those classes. However, the American Heart Association (AHA) position on this issue is clear. According to the AHA *Basic Life Support for Healthcare Providers*, there are two indications to begin chest compressions for an infant or child (Chapter 3, pp. 6-7, bold italics added):

"If a pulse is not palpable **or heart rate is less than 60 and there are signs of poor systemic perfusion:**

- Begin chest compressions.
- Coordinate compressions and ventilations.
- After providing approximately 20 cycles of compressions and ventilations, activate the EMS system."

These recommendations were instituted with the 1992 AHA National Conference. The rationale for the first indication for chest compressions is obvious: when there is insufficient cardiac output to generate a palpable pulse, chest compressions are required to provide circulation. The basis for the second indication for chest compressions in an infant or child may be less evident.

Cardiopulmonary arrest in infants and children is almost always the result of progressive deterioration, not an acute cardiac event. The cause is usually hypoxia, acidosis, and/or inadequate perfusion to the vital organs (shock). Therefore, most cardiac arrests in children are thought to be preventable.

Perfusion to the vital organs, including the heart itself, depends upon adequate cardiac output. Cardiac output is the volume of blood ejected by the heart each minute (cardiac output = heart rate x stroke volume). Infants and young children are less able to increase stroke volume than are adults. So, when stressed by hypoxia, acidosis or inadequate circulating blood volume, they must maintain cardiac output by increasing their heart rate. If oxygen delivery to the cardiac muscle is inadequate, the heart rate will slow further, impairing tissue perfusion. Thus, bradycardia (heart rate < 60 per minute) is an ominous sign.

Without adequate perfusion, the tissues continue to become hypoxic and more acids are produced. The progression of these events further decreases cardiac output. Without proper intervention this cycle of hypoperfusion will continue and ultimately result in complete cardiopulmonary arrest. Intact survival is less than 10%, and many of those resuscitated suffer permanent neurologic damage. The goal of pediatric Basic Life Support is to prevent the development of complete cardiopulmonary arrest. By initiating chest compressions coordinated with ventilations before a full cardiac arrest occurs, the effective heart rate is increased and cardiac output is improved, improving perfusion to the vital organs.

The signs of inadequate perfusion include:

- Depressed mental status, poorly responsive to verbal or painful stimuli
- Cool, pale skin
- Prolonged capillary refill time (CRT)
- Weak central (brachial, femoral or carotid) pulses

When bradycardia accompanied with signs of inadequate perfusion are evident, CPR is clearly indicated. The hand position, rate and depth of compressions and ratio of compressions to ventilations remain the same as they are for an infant or child without a pulse.

Some providers of care may be reluctant to begin chest compressions on a child who is not pulseless. They may fear that they will cause injury to the child. An important point to remember is that the chest wall of infants and children is very compliant. Even in cases of severe blunt trauma to the chest, the incidence of rib fractures in children is rare. Damage to the underlying structures is always a concern. That is why proper hand placement is important. Avoid compression of the xyphoid process, which is the lower most portion of the sternum, because such compressions may injure the liver, stomach or spleen.

Why is pulselessness the only indication for chest compressions in the BLS course taught to the lay public? To keep the amount of material needed at a level that the non-health care provider can assimilate, the concept of perfusion is not taught. This simplification is not necessary for the prehospital care provider who has learned to assess perfusion and the rate of the pulse.

The most important message of this article is to reinforce the interventions needed to prevent cardiopulmonary arrest in the pediatric age group. If perfusion can be maintained or improved, the chance that the child will survive is greatly increased. After all, isn't that the reason we took the CPR course in the first place?

For more information, contact Mary Jean Erschen at (608) 266-7457 or e-mail erschmj@dhfs.state.wi.us.

CHILDHOOD EMERGENCIES: PREVENTION AND MANAGEMENT

A Conference for All Providers of Care

October 10, 2000
Paper Valley Hotel – Appleton, WI
8:00 AM – 4:00 PM

Mark your calendars! The Division of Public Health, Bureau of Emergency Medical Services and Injury Prevention, Emergency Medical Services for Children Program invites you to attend the first conference highlighting pediatric emergencies! The guest keynote luncheon speaker will be Dr. Victor La Cerva, Medical Director for the New Mexico Department of Health. Dr. La Cerva is a nationally renowned expert in violence prevention who is the author of "Pathways to Peace – Forty Steps to a Less Violent America". Many of us feel overwhelmed by the amount of violence in our society. Dr. La Cerva will present a perspective that explores some of the root causes, and inter-relationships of violent acting out. He will also discuss solutions at the personal, family, community and larger cultural levels with a particular emphasis on

the role of the service providers and community leaders in effective communication with young people, fostering resiliency, and minimizing the adverse effects of witnessing violence. Other highlights include:

Wisconsin's Child Alert Program – Emergency Care for Special Needs
Communicating to deaf children in an emergency
Prehospital care and treatment for pediatrics
PARTY! Prevention of Alcohol Related Trauma in Youth
Pediatric Trauma Care
Clinic, Urgent Care and Physician Office Preparedness
Emergency Preparedness for Schools, Child Care and Parents
CPR and defibrillation in Schools – The ADAM Project
Bringing it all together – Communities, Schools and Health Care
Child Passenger Safety
Project UJIMA – Working Together to Prevent Violence
Injury Prevention in your Community – What can I do?
Recognizing Child Abuse and Assault – What can, should and must I do?

The costs are $30.00 for professional level CMEs and CEUs and DPI Credit hours, $20.00 for prehospital care providers and parents. Scholarships will be available upon request to cover conference registration fees. Make your reservations now at the Paper Valley Hotel, Appleton by calling 1-800-242-3499 or (920) 733-8000. A block of rooms will be reserved until September 9, 2000. A limited amount of rooms will be reserved at the conference rate of $52.00/single or $72.00/double.

For more information, please contact Mary Jean Erschen at (608) 266-7457 or erschmj@dhfs.state.wi.us.

FOR MORE INFORMATION

For more information on these and other topics, check out the Wisconsin Emergency Medical Services on the Internet at http://www.dhfs.state.wi.us/DPH_EMSIP/index.htm.